Notice of Allowability	Application No.	Applicant(s)	
	09/981,678	LANGO ET AL.	
	Examiner	Art Unit	
	Shawki S. Ismail	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to *the RCE amendment received April 10, 2006*.

2. ☐ The allowed claim(s) is/are *1, 4-9, 12-15, 18-21, and 24-27 re-numbered 1-19*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 20061004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *20060806* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

SALEH NAJJAR
SUPERVISORY PATENT EXAMINER

EXAMINERS AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and /or additions by unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such amendment, it must be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Jordan M. Becker (Reg. No. 39,602) on July 27, 2006.

3. The application has been amended as follows:

Claims 1-4, 6-8, 10-12 and 14-23 have been replaced with the following amended claims.

4. 1. (Currently Amended) A cache memory device configured for media data streaming, the cache memory device comprising a memory and a processor configured to store in said memory:

a session data file configured to store properties of a media stream including media data, wherein the properties include one or both of : an encoding scheme of the media stream and a duration of the media stream; ~~and~~

a plurality of data object files, each data object file individually and directly accessible by a file system, each data object file comprising a data object configured to store a portion of the media data of the media stream;

wherein each of the plurality of data object files comprises a data object that comprises an object meta-data portion and a plurality of data chunks,

wherein the object meta-data portion is configured to store a number representing a total number of data chunks in the plurality of data chunks,

wherein each data chunk of the plurality data chunk is configured to store a subset of the portion the media data,

wherein each data chunk comprises a chunk meta-data portion, a packet meta-data portion, and a plurality of packet payloads,

wherein the chunk meta-data portion is configured to store a number representing a total number of packet payloads in the plurality of packet payloads,

wherein the packet meta-data portion is configured to store a presentation time for each packet payload and

wherein each of the plurality of packet payloads are configured to store only a portion of the subset of the portion of the media data.

2. (Cancelled).

3. (Cancelled).

4. (Currently Amended) Replace "The cache memory device of claims 2" with "The cache memory device of claims 1".

6. (Currently Amended) Replace "The cache memory device of claims 2" with "The cache memory device of claims 1".

7. (Currently Amended) Replace "The cache memory of claims 3" with "The cache memory device of claims 1".

8. (currently Amended) A method for storing in a cache memory, media data to be output as streaming media, the method comprising:

storing a first plurality of data objects in the cache memory the first plurality of data objects configured to store a first plurality of data associated with a first encoding of media stream, wherein each data object of the first plurality of data objects is directly addressable in the cache memory via an associated object handle, and wherein each data object of the first plurality of data objects is configured to store a portion of data of the media stream; and

storing a second plurality of data objects in the cache memory the second plurality of data objects configured to store a second plurality of data associated with a second encoding of the media stream, wherein each data object of the second plurality of data objects is directly addressable in the cache memory via an associated object handle, and wherein each data object of the second plurality of data objects is configured to store a portion of data of the media stream;

wherein a data object of the first plurality of data objects comprises an object meta-data portion and a plurality of data chunks,

wherein the data object is configured to store a first portion of data from the first plurality of data,

wherein the object meta-data portion is configured to store a number representing a total number of data chunks in the plurality of data chunks,

wherein the plurality of data chunks are configured to store a subportion of data from the first portion of data,

wherein a data chunk of the plurality of data chunks comprises a chunk meta-data portion, packet meta-data portion and a plurality of packet payloads,

wherein the data chunk is configured to store a subportion of data from the portion of data,

wherein the chunk meta-data are configured to store a number representing the total number of packet payloads in the plurality of packet payloads,

wherein the packet meta-data portion is configured to store a presentation time for each packet payload, and

wherein the plurality of packet payloads are configured to store a smaller subportion of data from the portion of data.

10. (Cancelled).

11. (Cancelled).

12. (Currently Amended) Replace "The method of claims 10" with "The method of claims 8".

14. (Currently Amended) Replace "The method of claims 10" with "The method of claims 8".

15. (currently Amended) A machine-readable storage medium for use in a processing system that includes a processor and a memory, the storage medium having stored thereon:

code that directs the processor to store a first plurality of data associated with an encoding of a first media stream in a first plurality of data objects in the memory,

wherein each data object of the first plurality of data objects is addressable in the memory by the processor via an associated first object filename, and wherein each data object of the first plurality of data object is configured to store a portion of data from the

media stream; and

code that directs the processor to store a second plurality of data associated with an encoding of a second media stream in a second plurality of data abject in the memory, wherein each data object of the second plurality of data objects is addressable in the memory by the processor via an associated second object filename, and wherein each data object if the second plurality of data objects is configured to store a portion of data from the second media stream

wherein a data object of the first plurality of data object comprises and object meta-data portion and a plurality of data chunks,

wherein code that directs the processor to store a first plurality of data comprises:

code that directs the processor to store a subset of data from the portion of data from the first plurality of data into the plurality of data chunks; and

code that directs the processor to store a number representing a total number of data chunks in the plurality of data chunks into the object meta-data portion.

wherein a data chunk of the plurality of data chunks comprises a chunk meta-data portion, a packet meta-data portion, and a plurality of packet payloads,

wherein code that directs the processor to store the subset of data comprises:

code that directs the processor to store a smaller subset of data from the portion of data from the first plurality of data into the plurality of packet payloads;

code that directs the processor to store a number representing a total number of packet payloads in the plurality of packet payloads into the chunk meta-data portion; and code that directs the processor to store a presentation time for each packet payload

in the packet meta-data portion.

16. (Cancelled).

17. (Cancelled).

18. (Currently Amended) Replace "The machine-readable storage medium of claims 17" with "The machine readable storage medium of claims 15".

19. (Currently Amended) Replace "The machine-readable storage medium of claims 16" with "The machine readable storage medium of claims 15".

20. (Currently Amended) Replace "The machine readable storage medium of claims 17" with "The machine-readable storage medium of claims 15".

21. (Currently Amended) A cache memory device configured to store streaming media data, the cache memory device comprising:

a processor;

a cache memory;

code that directs the processor to receive streaming media data of a media stream from a streaming media server, the streaming media data comprising a series of packets of media data of the media stream, the packets of the media data including header data and payload data of the media stream;

code that directs the processor to separate the header data from the payload date;

a session data file storing a portion of the header date, wherein the header data include one or both of: encoding scheme and duration; and

a plurality of data objects storing the payload data, wherein each data object of

the plurality of data objects is direct addressable in the cache memory via an associated object handle, and wherein each data object of the plurality of the data objects stores a portion of the payload data of the media stream;

wherein a data object from the plurality of data objects comprises an object meta-data portion and a plurality of data chunks,

wherein the object meta-data portion stores a number representing a total number of data chunks in the plurality of data chunks,

wherein each data chunk of the plurality of data chunks stores a subset of the portion of the payload data,

wherein a data chunk of the plurality of data chunks comprises a chunk meta-data portion, packet meta-data portion and a plurality of packet payloads,

wherein the chunk meta-data portion stores a number representing a total number of packet payloads in the plurality of packet payloads,

wherein the packet meta-data portion is configured to store a presentation time for each packet payload, and

wherein each of the plurality of packet payloads stores only a portion of the subset of the portion of the payload data.

REASONS FOR ALLOWANCE

5. Claims 1, 4-9, 12-15, 18-21, and 24-27 re-numbered 1-19 are allowable over the prior art of record.

This communication warrants no examiner's reason for allowance, as applicant's reply makes evident the reason for allowance, satisfying the record as whole as required by rule 37 CFR 1.104 (e). In this case, the substance of applicant's remarks in the amendment filed on 10 April 2006 with respect to the amended claim limitations and further amended claim limitations in the Examiner's Amendment filed on 6 August 2006 point out the reason claims are patentable over the prior art of record. Thus, the reason for allowance is in all probability evident from the record and no statement for examiner's reason for allowance is necessary (see MPEP 13202.14).

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submission should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawki S Ismail whose telephone number is 571-272-3985. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shawki Ismail
Patent Examiner
August 7, 2006

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SUPERVISORY PATENT EXAMINER